

REMARKS

This is intended as a full and complete response to the Office Action dated December 22, 2004, having a shortened statutory period for response set to expire on March 22, 2005.

Claims 24, 25, and 31 have been indicated to be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 1, 3, 5, 11, 16 and 26 have been amended to clarify the invention. New claims 39-42 have been added to more clearly recite aspects of the invention. Applicant believes no new matter has been introduced by the amendments and the new claims presented herein. The amendments have been made in a good faith effort to advance prosecution on the merits. Claims 6, 12, 18, 20, and 27 have been cancelled without prejudice. Applicant reserves the right to subsequently take up prosecution of the claims as originally filed in this application in a continuation, a continuation-in-part and/or a divisional application. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1, 3-5, 7, 11, 13, 14, 16-18, 21, 26, 28, and 32-38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,948,059 (*Bodine*). *Bodine* generally proposes a method for unscrewing threaded pipe joints using a sonic vibration generator driven by a motor. *Bodine*, however, does not teach or disclose a sonic wave generator having a solid state device, as recited in claim 1; a sonic wave generator having at least a piezoelectric ceramic, as recited in claims 5, 16 and 26; a means for generating the sonic waves comprise a piezoelectric ceramic, as recited in claim 11; and a pressure wave generator having at least a stack of piezoelectric plates, as recited in claim 3. Accordingly, claims 1, 3, 5, 11, 16 and 26 are patentable over *Bodine*. Claims 4, 7, 13-14, 17-18, 21, 28 and 32-38 are patentable over *Bodine* since they respectively depend from claims 1, 3, 5, 11, 16 and 26.

Claims 2, 6, 12, 20, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bodine* in view of U.S. Patent No. 4,752,917 (*Dechape*). Claims 6, 12, 20, and 27 have been cancelled without prejudice. The limitations of claims 6, 12, 20, and 27 have been incorporated into claims 3, 5, 11, 16, 26 and 39-41, respectively.

The Examiner concedes that *Bodine* fails to teach or disclose a sonic wave generator having at least one of a piezoelectric ceramic and a stack of piezoelectric plates. The Examiner attempts to supplement this missing limitation with *Dechape*.

Dechape is generally directed to a distance measurement system having a sonic wave transmitter in the form of a piezoelectric ceramic element. The sonic wave transmitter is configured to emit sonic waves. The time taken by the waves to reach a receiver is measured to provide an indication of the distance between the transmitter and the receiver. In contrast, claim 1 is directed to a back-off tool for use in a tubular member disposed inside a wellbore, claims 5 and 11 are directed to an apparatus for loosening a threaded connection joining an upper portion and a lower portion of a tubular member; claim 16 is directed to a method for loosening a threaded connection on a tubular member; and claim 26 is directed to a method for backing off an upper portion of a tubular member joined to a lower portion of the tubular member by a threaded connection in a wellbore. There is no suggestion discerned in *Bodine* or *Dechape* of modifying the sonic wave transmitter in the direction of claims 1, 5, 11, 16 and 26, nor does there appear to be any suggestion of the desirability of such modifications. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP 2143.01. The absence of such a suggestion to combine the references is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 (Fed. Cir. 1997). Therefore, claims 1, 5, 11, 16 and 26 are patentable over *Bodine* in view of *Dechape*.

Further, neither *Bodine* nor *Dechape*, alone or in combination, teaches nor discloses a pressure wave generator having at least a stack of piezoelectric plates, as recited in claim 3; a sonic wave generator having at least a stack of piezoelectric plates, as recited in claims 39 and 41; and means for generating the sonic waves having a stack of piezoelectric plates, as recited in claim 40. There is also no suggestion discerned in *Bodine* or *Dechape* of modifying the devices or methods disclosed therein in the direction of the claims 3 and 39-41, nor does there appear to be any suggestion of the desirability of such modifications. Therefore, claims 3 and 39-41 are also patentable over *Bodine* in view of *Dechape*.

Claims 8-10 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bodine* in view of U.S. Patent No. 6,012,521 (*Zunkel*). Neither *Bodine* nor *Zunkel*, alone or in combination, teaches or discloses a sonic wave generator having at least a piezoelectric ceramic, as recited in claims 5 and 16. Furthermore, there is no suggestion discerned in *Bodine* or *Zunkel* of modifying the devices or methods disclosed therein in the direction of claims 5 and 16, nor does there appear to be any suggestion of the desirability of such modifications. Since claims 8-10 and 19 depend from claims 5 and 16, respectively, and since neither *Bodine* nor *Zunkel*, alone or in combination, teaches, discloses or suggests all the limitations of claims 5 and 16, claims 8-10 and 19 are therefore also patentable over *Bodine* and *Zunkel*.

Claims 15, 22, 23, 29, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bodine* in view of U.S. Patent No. 2,305,261 (*Kinley*). Neither *Bodine* nor *Kinley*, alone or in combination, teaches or discloses a means for generating sonic waves having a piezoelectric ceramic, as recited in claim 11; and a sonic wave generator having a piezoelectric ceramic, as recited in claims 16 and 26. Furthermore, there is no suggestion discerned in *Bodine* or *Kinley* of modifying the devices or methods disclosed therein in the direction of claims 11, 16 and 26, nor does there appear to be any suggestion of the desirability of such modifications. Since claims 15, 22, 23, 29, and 30 respectively depend from claims 11, 16 and 26, and since neither *Bodine* nor *Kinley*, alone or in combination, teaches, discloses or suggests all the limitations of claims 11, 16 and 26, claims 15, 22, 23, 29, and 30 are therefore also patentable over *Bodine* and *Kinley*.

Claims 24, 25 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant acknowledges the allowable subject matter, but has elected to not rewrite these claims in independent form at this time. It should be noted that Applicant has amended claims 16 and 26 from which claims 24, 25 and 31 respectively depend.

With regard to new claim 42, Applicant submits that claim 42 recites subject matter that is neither disclosed, taught, nor otherwise suggested by the cited references, and as such, allowance of these claims is respectfully requested.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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